

CEMP-EC

DEPARTMENT OF THE ARMY
U.S. Army Corps of Engineers
Washington, D.C. 20314-1000

ER 1110-3-1300

Regulation
No. 1110-3-1300

16 April 1993

Engineering and Design
MILITARY PROGRAMS COST ENGINEERING

1. Purpose. This regulation describes U.S. Army Corps of Engineers (USACE) cost engineering policies, requirements, and procedures for Military Programs. It provides guidance in the development and submission of cost estimates used in the Military Construction (MILCON) programs. In addition, it prescribes procedures for reporting descriptive data and cost estimates based on contract awards for all MILCON projects.

2. Applicability. This regulation applies to all HQUSACE, major subordinate commands (MSC), districts, laboratories, and all field operating activities (FOA) having cost engineering responsibilities for military and support for others projects.

3. References.

- a. Public Law 97-214, Military Codification Act.
- b. AR 37-108, General Accounting Reporting for Finance and Accounting Office.
- c. AR 340-17, Release of Information from CE Files under freedom of Information Act.
- d. AR 415-15, Military Construction Program.
- e. AR 415-17, Construction Estimating for Military Programming.
- f. AR 415-28, Department of Army Facility Classes and Construction Category.
- g. TM 5-800-2, Cost Estimates Military Construction.

* This regulation supersedes ER 335-345-1 and ER 415-345-42

ER 1110-3-1300
16 Apr 93

h. ER 37-345-10, Accounting and Reporting - Military Activities.

i. ER 415-345-10, Congressional Limitations and Reporting Requirements.

j. ER 415-345-230, Negotiation Regulation Cost-Plus-A-Fixed Fee Construction Contract.

k. ER 1110-1-1300, Cost Engineering Policy and General Requirements.

l. ER 5-7-1(FR), Project Management.

4. Policy. In addition to the general guidance in ER 1110-1-1300, all construction cost estimates for military and support for others projects will be prepared in accordance with the referenced regulations and this regulation.

5. General. Military and support for others construction is regulated by public law. Every MILCON project must be specifically authorized and appropriated in MILCON legislation or performed under special authority (e.g., 10 USC 2803, 10 USC 2854). The Military Construction Codification Act, PL 97-214, unified and codified the statutory constraints and limitations for the Military Construction process.

6. Project Development.

a. The typical military project begins when a requirement for construction, alteration, addition, and/or renovation of a facility is identified at a military installation. This project requirement and programmed cost are justified on a Department of Defense (DD) Form 1391 prepared by the military installation. The DD Form 1391 is carefully reviewed and scrutinized at different levels within the respective Department of Defense agencies and submitted to Congress for construction funding authorization. Construction may be programmed or accomplished under a number of regulations, and may be authorized and appropriated by separate acts of Congress. For support for others projects the requirement is normally described in the Scope of Services or Memorandum of Agreement.

* This regulation supersedes ER 335-345-1 and ER 415-345-42

16 Apr 93

b. The development of a project is a continuous process and will impact project cost as the scope of work is being defined. Development of accurate estimates is essential to the successful accomplishment of the project and the early participation of Cost Engineering personnel is of great importance in all phases of project development to insure that proper consideration is given to all aspects of the project in developing the project estimate.

7. Costs of Project. Cost accounting will be in accordance with the provisions of ER 37-345-10. The costs listed in subparagraphs a, b, c, d, and e below, as applicable, will be charged against construction authorizations and will be included in Current Working Estimates (CWEs). (See ER 415-345-10 for items to be included in applying legislative cost limitation.) Materials, labor and equipment (including construction equipment, installed building equipment, and equipment in place used in the completed facility) furnished without charge to construction funds will not be employed to provide construction of greater size or capacity, or to a higher standard than contemplated by the authorizing legislation or directive. The cost of the "free issue" material, labor, and equipment must be included in the project cost as indicated in subparagraph c. below. Costs will include:

a. The contract cost, if work is performed by contract, or the cost of plant, labor, and materials, if performed by Government plant and hired labor.

b. Any other costs authorized by directive to be charged to construction as a funded cost, such as the installation costs or installed equipment in place to be furnished by the using service or other agency, and the cost of Government furnished materials or equipment (GFM or GFE) purchased with construction funds and furnished to the contractor without reimbursement.

c. The cost of materials, labor, and equipment (including construction equipment and installed building equipment and equipment in place used in the completed facility), which are furnished without reimbursement from construction funds, will be included, if the DD Form 1391 on which the authorizing legislation was based included the value of such materials, labor, or equipment in the budget estimate. In this case, "free issue" will be separately accounted for on estimates, job authorizations, and directives as unfunded cost. Costs of "free

ER 1110-3-1300
16 Apr 93

issue" labor and construction equipment will be determined as follows:

(1) The cost of troop labor will be figured at the rates prescribed in AR 37-108, chapter 17.

(2) Rental value of "free issue" construction equipment, including Government-owned construction equipment and troop construction equipment will be determined in accordance with ER 415-345-230.

d. An allowance for construction contingency reserve. Construction contingency reserve is defined as an allowance for possible or unforeseen occurrences at the time of contract award. It is an allowance against some adverse or unanticipated condition not able to be determined from the data at hand during engineering and design, but which must be expressed or represented in the project cost estimate. Ordinarily, this allowance is for latent difficulties, such as unforeseeable relocations; unforeseeable foundation conditions; encountering utility lines in unforeseeable locations; or other unforeseen problems beyond interpretation of the design data at the time of contract award. It is not an allowance for omissions of work items which are known to be required but for which fairly accurate quantities have not yet been determined by specific design, because reasonable allowances for all foreseeable work items should be made in the estimate. Allowance for construction contingency reserve are defined in subsequent paragraphs and applicable rates are stated in paragraph 10c.

e. Supervision Inspection and Overhead (SIOH), as defined in subparagraph 6-3i of ER 37-345-10, for projects to which the uniform Corps-wide rate for projects applies. For types of work excluded from the uniform Corps-wide rate (see ER 37-345-10, paragraph 7-13), cost of supervision, inspection, and overhead will be included on an actual cost basis in lieu of the uniform SIOH rate.

8. Cost Estimates.

a. Except for real estate estimates, there are basically only two types of cost estimates used in military construction, namely Current Working Estimates (CWEs) and Government Estimates. The CWEs are defined as the latest available construction cost

16 Apr 93

estimates on a particular project. The construction cost estimate includes the estimated contract cost, an allowance for construction contingency reserve, and an allowance for SIOH costs. Government Estimates referred to in this regulation are defined as independent construction cost estimates for procurement. Government estimates include estimated contract costs, or allowable contract modification costs, but do not include allowances for EDC, construction contingency reserve, allowances for SIOH costs. The term fair and reasonable cost estimates is sometimes used when referring to Government Estimates.

b. District or operating major subordinate command (OMSC) cost engineers will prepare estimates for facilities designed or constructed by USACE or will review and revise, if necessary, estimates for projects designed by others. The estimates will be prepared under conditions prescribed by design and construction directives or construction program annexes and construction program preparation instructions.

c. Cost estimates should be accurate as possible and should be based on the latest design data and site information available. In the absence of such data, and prior to concept design completion, empirical cost data from AR 415-17, local historical cost experience, or empirical cost data from commercial sources may be used. Lump sum costing must be justified and pricing methodology fully explained with supporting documentation.

9. Current Working Estimates (CWE) and Codes. The expected costs entering into the current working estimate are obtained from various sources depending upon the stage of the design and contract award process. As such the reliability of a cost estimate varies with the source and refinement of the data. A coding system has been devised to report the basis of the current working estimates by placing the code letter in parentheses after the CWE figure. The Codes and the various stages of design and contract award to which they are related are as follows:

a. Code A - Less than concept design completed.

b. Code B - Concept design completed (design 35 percent complete). This is a concept design control estimate (also called "budget CWE"), which will be updated as the design progresses. This estimate is used to develop the Army MILCON budget which forms the basis for project authorization and

ER 1110-3-1300
16 Apr 93

appropriation by Congress. The importance of firm requirements and accuracy of the estimate at this stage cannot be overemphasized, because when approved by Congress, the scope and program amount (PA) become the controlling factor influencing the project design and construction execution.

c. Code C - Final design, including working drawings and specifications in progress or completed. Each such estimate will be dated to reflect the point in time at which it is made or revised.

d. Code D - Bids opened and lowest responsible bidder determined.

e. Code E - Construction contract award cost data.

f. Code F - Construction 100% complete.

For example, using code designations indicated above, when reporting the total cost of an estimate for which no design has been accomplished, could be annotated "\$97,000.00 (A)"; and similarly, an estimate made after the construction contract was awarded could be annotated "\$94,500.00 (E)".

10. Preparation of CWE. The current version of the Micro Computer Aided Cost Engineering System (MCACES) software and approved parametric estimating tools will be used to prepare CWE. Current working estimates will include the items listed in subparagraphs a, b, c, and d below. If a portion of the work authorized on the DD Form 1391 is to be done by a future contract or by other means and is withheld from the final design, request for bids, or contract award, a proper allowance for the cost of this work will be included in the CWE. This allowance will be calculated as if the work were a separate project, with appropriate amounts for the items listed in subparagraphs a, b, c, and d below. The items to be included in CWE are:

a. Estimated or actual contract cost, including contractor's overhead and profit, or cost of labor, materials, and plant if performed by Government plant and hired labor. The estimated contract cost within the CWE will be obtained as follows:

(1) When design has not been accomplished or similar construction experience in the same locality is not available, the cost data contained in AR 415-17 will be used as guidance in estimating contract costs for proposed construction. If a

16 Apr 93

standard design will be used and cost data for that design are available, it should be used as adjusted. (Code A, when items b, c and d below are added.)

(2) After concept design has been started or completed, the estimated contract cost will be based upon this work which should be updated as required. (Code B, if concept design is completed and item b, c and d below are added.)

(3) After final working drawings and specifications have been started or completed, the estimated contract cost will be based upon these documents. The final design Code C estimate shall be prepared using the latest version of MCACES and current approved work breakdown structure for military projects. TM 5-800-2 illustrates the format required for summarization of contract direct costs, indirect costs, profit, bond, and other contract requirements for CWE's and Government estimates. (Code C, where items b, c, and d below are added to CWEs.)

(4) After bid opening, the bid submitted by the successful responsive bidder will be used as the contract cost. (Code D, when items c and d below are added.)

(5) After award of contract, the contract price adjusted to include modifications or change orders, if any, will be used as the contract cost. (Code E or F, when items c and d are included.)

b. Cost growth due to economic factors. The estimated contract cost which includes the cost of materials, labor, and equipment for Code A, Code B, and Code C estimates will include an allowance for cost growth from the estimate was prepared to the midpoint of construction as prescribed in AR 415-17. The estimated contract cost within the CWE for Code C and Government estimates should include analyses for cost growth considerations for scheduled (or actual):

(1) Prices based on delivery dates to the site for materials and equipment to be installed.

(2) Labor and construction equipment costs in compliance with the construction schedule.

c. An allowance for construction contingencies reserve.

ER 1110-3-1300
16 Apr 93

Construction contingencies reserve will be added to the estimated contract cost referred to in paragraph 10a above in the following established amounts:

(1) The construction contingency reserve allowance for military construction projects will in all cases be 5 percent, except that for alteration or modernization of existing facilities the construction contingency reserve allowance will be 10 percent.

(2) After opening of bids on military construction projects, the contingency allowance will be determined in accordance with the provision of AR 415-15.

d. Supervision, Inspection, and Overhead Cost (SIOH). Current working estimates for projects to which the uniform Corps-wide rate applies will include an allowance of 6.0 percent SIOH for CONUS and 6.5 percent for OCONUS projects. For projects to which the uniform rate does not apply, an actual cost basis estimate should be used. (See ER 37-345-10 for details of accounts.)

11. Submission of CWE. The ENG Form 3086 module of the DD 1391 Processor System is the USACE reporting system to be used for upward reporting of budgetary CWE. The budgetary CWE is the concept (35%) design estimate for Military Construction, Army, and most other programs that are submitted for Congressional budgeting purposes. Submission of budgetary CWE takes place every year as part of the DoD budget submission to Congress. A current working estimate (Code B) will be submitted to HQUSACE (ATTN: CEMP-EC) not later than 1 August during the design year.

a. The Cost Engineering office of the design district or OMSC will prepare CWE in a prescribed format outlined in Appendix A of this regulation.

b. CWEs for budget reporting will be prepared using the automated ENG Form 3086 software or other approved software. It will consist of primary and supporting facilities items, as well as including information systems. Its cost items should be developed as unit costs and based on the latest design information available. (For medical projects, see Architectural and Engineering Instructions for Medical Design Standards.) Instructions for preparation of ENG Form 3086 is described in

Appendix A.

c. All budgetary estimates shall be internally reviewed and approved by the Chief of Cost Engineering office of the design district or OMSC prior to release for upward reporting.

12. CWE for Control Purposes.

a. A CWE is prepared to determine the expected cost of a project. Once such an estimate is prepared, it will be used as a working tool to analyze costs and control subsequent design decisions so that the project can be constructed within the allotted funds and approved scope. When so used, it is referred to as a "control estimate." Control estimates are required for all facilities following the normal design process of concept through final design stages of development. The number of required control estimates determined necessary for any project should be included in the Architect Engineer (A-E) contract and should be required at the design milestones established by the design activity.

(1) All OCONUS projects shall include International Balance of Payment (IBOP) determination. Estimates will not be included in project documentation but will be retained at the location where the documentation entered the system. The project will be evaluated for IBOP impact in accordance with DODI 7060.2; Federal Acquisition Regulation (FAR); and Department of Defense

Federal Acquisition Regulation (DFAR), subpart 225.3. The project cost, as submitted, shall be estimated under normal or revised procedures.

b. Control estimates will be prepared, to the degree practicable, in accordance with TM 5-800-2 requirements. Unit price or parametric estimates may be used in lieu of separate estimates for materials, labor, and equipment in Code A and Code B estimates. Code C estimates will be prepared in accordance with TM 5-800-2 and will separately price materials, labor, equipment, indirect costs, and other project markups.

c. The final design control estimate (Code C) will be based on the expected cost to the Government of performing the work by contract and will be prepared in the same careful manner as if the Government were bidding in competition with prudent, experienced, and well-equipped contractors. The control estimates will be based on the most recent and complete design

information available and will reflect the local labor situation and material prices anticipated or forecasted to prevail in the vicinity of the project at the time the project is scheduled to be constructed. The designing office should always identify the design control estimates by date of preparation, or by date of revision, so as to eliminate doubt or confusion as to whether it is up-to-date with the latest plans and specifications. The designer or project manager should use the latest final design control estimate as a tool to insure that the design is such that the project can be constructed within the allotted funds.

d. Review of the final design control estimate will be accomplished by the appropriate design district or OMSC cost engineers. Special care and attention should be given to the review, because the Government must assure that the design is such that the project can be constructed within the allotted funds. If the review shows that the project cannot be constructed within allotted funds, the designing office, through their respective MSC, will inform HQUSACE (CEMP-MA), the MACOM, and the using service before the project is advertised, and necessary actions will be taken to resolve the matter in such a way the project can be constructed within the allotted funds.

e. In some cases where an abnormally long period of time has elapsed (over six months) between design completion and project advertising, there will be a need to update the final design control estimate in preparation of the Government Estimate. The updating will be accomplished based on the latest available published unit prices or latest quotations for materials, labor, construction equipment, and cost growth factors.

f. Final design control estimates which have been revised to incorporate changes and which fully reflect costs based on the final plans and specifications will be used as the basis for the Government Estimates.

13. A-E Estimates.

a. When it is necessary to use the services of Architect Engineer (A-E) firms for preparation of cost estimates, such services shall be performed by firms competent in cost engineering.

b. When using an A-E estimate to prepare an ENG Form 3086 or Government estimate, a thorough cost review and analysis shall be made on such estimate to insure that the estimate is based on the

16 Apr 93

approved scope of work as detailed in the DD Form 1391 or memorandum of agreement for the project.

c. All A-E estimates shall be reviewed and validated to insure that they comply with the USACE latest cost engineering guidelines and regulations prior to release or submission for upward reporting.

14. Government Estimates. Government estimates are used to evaluate bids, to analyze contractor bids during negotiations, and to serve as a guide in establishing a schedule of payments.

a. Government Estimates will not include allowances for construction contingencies reserves or SIOH. Each Government Estimate will be dated and signed by the District or OMSC Commander or a representative authorized for that purpose.

b. Government Estimates for negotiated contracts and change orders or supplemental agreements thereto may be changed when error is discovered, when additional information is received, or when site conditions or construction schedules are changed.

c. Government Estimates for advertised contracts will not be changed after the bids are opened without approval in writing from the Contracting Officer. If changes are made in a Government Estimate which has been signed and dated, details and circumstances causing the change will be fully explained and documented.

d. Access to the estimate and its contents during preparation, prior to bid opening or conclusion of negotiations, will be limited to personnel whose duties require that they have a knowledge of the subject. The Government Estimates shall be designated "For Official Use Only," (See AR 340-17), unless the nature of the information contained therein requires security classification, in which event it shall be handled in accordance with applicable security classification regulations. When the "For Official Use Only" designation is used, only the sheet or sheets of the estimate which furnish conclusive information on prices will be marked. The "For Official Use Only" markings shall be removed upon opening of bids or after award of a negotiated contract (DFAR 36.203(c)).

e. Award of contracts in excess of 15 percent over the Government Estimate will be subject to approval by the MSC Commander in accordance with EFAR 36.203(101)(a).

15. Cost Variation.

a. Cost variations require approval of HQUSACE and will be processed in accordance with ER 5-7-1 (FR). Cost variations are described as increases or decreases in the Budget CWE either due to change in scope, design criteria, functional requirements, new technologies, and or contracting requirements.

b. HQUSACE (CEMP-MA), MACOM, the using agency, and Medical Facilities Design Office (CEMP-EM) (for medical projects only) shall be informed as soon as possible after it is determined that the CWE exceeds the programmed amount by 5 percent.

c. All cost variations due to change in scope or user requirements shall be properly documented and fully described in the ENG Form 3086 and or budgetary estimates.

d. All cost variations shall be reviewed and approved by the Chief of Cost Engineering of the design district or OMSC before submission or release.

16. Cost Data Report.

a. Contract cost data on awarded projects are essential for the development of cost guidance for DOD facilities. The reporting of accurate and complete cost data is imperative as these data are used to formulate and or update the DOD Pricing Guide and AR 415-17.

b. Responsibility for reporting cost data lies with the design district or OMSC, acting as the construction agent, takes bids, awards the contract, or manages and/or supervises the contract for construction of the Army facilities. Where another military service is the constructing agency on a project designed by a USACE district or OMSC, necessary data and instructions for complete reporting will be furnished by the USACE district or OMSC directly to the field office of the construction agency, which will prepare the report.

c. The Cost Engineering element at the district or OMSC shall prepare and submit construction cost information for the Cost Report Analysis Generator (CRAG) to HQUSACE (CEMP-EC) in accordance with the instructions described in Appendix B.

d. All cost data reports shall be carefully reviewed and

16 Apr 93

approved by the Chief of the Cost Engineering element of the district or OMSC before submission or release. The cost data report shall be submitted not later than 30 days after award of contract.

17. Use of Cost Data.

a. The Cost Engineering Branch (CEMP-EC), Engineering Division, Directorate of Military Programs, HQUSACE will review, analyze, assemble, consolidate, and manage the input cost data.

b. The CRAG cost data will be available to all USACE elements and other services. Upon approval by the Tri-Service Cost Engineering Committee and the Office of the Secretary of Defense, these cost data will be used to formulate and/or update the Department of Defense Military Construction Pricing Guide and Table I, Cost Estimate-Military Construction in AR 415-17.

FOR THE COMMANDER:

2 Appendices
App A - Preparation of
 ENG Form 3086
App B - Preparation of
 Cost Data Report

WILLIAM D. BROWN
Colonel, Corps of Engineers
Chief of Staff

APPENDIX A

ENG FORM 3086

1. Instructions For Preparation Of ENG Form 3086.

a. The design district or OMSC must have access to the project's DD Form 1391 in order to prepare an electronic ENG Form 3086. Detailed instructions to access the Programming, Administration, and Execution System's (PAX) DD Form 1391 Processor System are provided in the users manual.

b. Because the ENG Form 3086 is a reporting tool and the reporting is to Congress, the format and detail of the ENG Form 3086 is structured similar to the DD Form 1391. Applicable items of work including category codes will be entered in the same order as shown in the attached sample DD Form 1391. A sample ENG Form 3086 showing the required detail of information is also attached.

(1) Primary facilities are main facilities fulfilling mission-essential functions. Primary facilities, such as buildings, should be identified by description and category code consistent with AR 415-28. The total estimated contract cost for primary facilities, such as buildings, should be estimated to include all construction costs within the five-foot line, and presented with a minimum breakdown of major construction costs to include general construction, plumbing, heating and ventilating, air conditioning, electrical, installed equipment consistent with applicable regulations, information systems, other items included on the DD Form 1391, and items as contained in the design directive. Unusual foundations for the primary facility, such as drilled piers, piles, mat foundation, or spread footing in addition to normal foundation requirements for such building should be shown as separate entries and as part of the primary facility costs.

(2) Supporting facilities include all remaining construction costs outside the primary facilities. The construction costs for supporting facilities for buildings begin outside the five-foot line from the exterior walls. Items to be included in supporting facilities should have sufficient descriptions and quantities to establish their costs. Supporting facilities for a typical building should include:

ER 1110-3-1300
16 Apr 93

(a) Electrical Service - power source and distribution system.

(b) Water, Sewer, & Gas - water, sewer, and gas supply and distribution system. Sanitary collection and disposal sewage system.

(c) Steam and/or Chilled Water Distribution - steam, hot or chilled water distribution system.

(d) Paving, Walks, Curbs & Gutters - roads, streets, parking areas, and shoulders (include type and thickness of surface, base, sub-base, and width for roads and streets). Walks, including type and thickness of paving. Curbs and gutters.

(e) Storm Drainage - storm drainage collection system including size and type of pipe, depth of trench, type of backfill, bracing, etc.

(f) Site Improvements - such as site clearing, borrow, cut and fill materials, rough grade, fine grade, topsoil, seeding, and landscaping. Demolition, including qualitative and quantitative description.

(g) Others - such as as-builts and operation and maintenance manuals (if applicable).

(3) Information Systems (IS) costs for primary and supporting facilities shown on the DD Form 1391 are based on information from Section 17 of the DD Form 1391.

(a) The initial cost estimate for IS requirements is prepared by either the Installation's Directorate of Information Management (DOIM) office, or the U.S. Army Information Systems Engineering Command (USAISEC), and/or 7th/5th Signal personnel. This estimate is then entered into the DD Form 1391 by the installation planner or programmer. The MACOM's DOIM office and USAISEC are responsible for review and validation of IS cost data.

(b) Section 17 contains three types of costs - MCA construction funds (CONF), Information System Command (ISC), and Proponent (PROP) costs. These costs are shown in DD Form 1391 under primary and support facilities for CONF funded items, and installed equipment - other appropriation for ISC and PROP funded

items.

(c) Where the USACE District or OMSC is responsible for designing the telecommunication systems, the development of information systems costs must be coordinated with the Installation DOIM or USAISEC and should be based on sufficient information to insure accuracy and completeness of the estimate. When not enough design information (less than 35% design) is available to estimate building information systems costs, the costs of information systems provided on the DD Form 1391 should be used.

(d) Where USAISEC or DOIM is responsible for design of telecommunication systems and development of building information systems costs, the cost estimate must be reviewed and validated before incorporating it to the overall project estimate.

(4) Category "E" Equipment (Cat "E") costs (for medical projects only and classified in Category 500) shown on DD Forms 1391 are developed by the using service and the Defense Medical Facilities Office (DMFO). Cat "E" equipment are Government furnished and contractor installed. Costs should be verified prior to their use in developing CWE's to ensure that the costs are properly adjusted for cost growth and installation costs included.

c. The current working estimate will be broken down into the items listed in subparagraphs (1) through (5) below and entered in the same order identical to the DD Form 1391 breakdown or as shown in the example.

(1) The estimated contract cost, or equivalent if work is to be performed by Government plant and hired labor. (Sum of all items in subparagraph b. above.)

(2) Construction contingency reserve (shown as a separate percentage and amount).

(3) Supervision inspection and overhead (SIOH) (shown as a separate percentage and amount).

(4) Estimated project cost. (Sum of (1), (2), and (3) above and category "E" equipment when required for medical projects, shown as a separate entry.)

(5) Cost growth actually applied in subparagraph (1) above;

ER 1110-3-1300
16 Apr 93

identify indexes and calculations as shown in the example.

d. In addition to the above cost figures, any factor which causes costs to be unusually high or low should be explained in the "Explanation of Data Development" or "Comment" blocks on ENG Form 3086. Examples of factors causing high costs are:

(1) Presence of rock in areas to be excavated or graded, presence of water in excavations, necessity of carrying

excavations for foundations or utilities to considerable depths, and unfavorable weather conditions which limit construction period.

(2) Abnormally high costs due to remoteness of the installation from labor market and material source.

(3) Scope and design criteria changes. All scope variation and design criteria changes must be fully explained. Indicate if changes were due to user requests or regulatory/statutory changes.

APPENDIX B

COST DATA REPORT

1. Preparation and Submission of Cost Data Report.

a. The awarded construction cost information shall be collected using the Cost Report Analysis Generator (PC CRAG). Detailed instructions for preparation and reporting of awarded construction cost information are provided in the PC CRAG user manual.

b. The costs to be reported will not include construction contingencies and SIOH. A sample data entry worksheet of the required information is attached for information purposes.

c. The cost data report will be submitted on a floppy disk within thirty days after award of the contract and forwarded to HQUSACE (ATTN: CEMP-EC). The cost data report shall be carefully reviewed and approved by the Chief of the Cost Engineering office of the design district or OMSC prior to its submission or release.

2. Reports Required.

a. Buildings. (All applicable construction category codes) Reports will be submitted for all new buildings (excluding additions to existing buildings) whether funded by appropriated or nonappropriated funds.

b. Liquid-fuel dispensing and/or storage facilities.

ER 1110-3-1300
16 Apr 93

(Construction Category Codes 120 and 410) Reports will be submitted for all liquid-fuel dispensing and/or storage projects where the contract award amount exceeds \$200,000 for these facilities.

c. Paving. (Construction Category Codes 110 and 850) Reports will be submitted for all paving projects where the quantity of paving of any one specified type exceeds 5,000 square yards. Separate reports are required for flexible pavement or rigid pavement where the quantity of either exceeds 5,000 square yards.

APPENDIX B

PROJECT COST DATA REPORT

1. Preparation and Submission of Project Cost Data Report.

a. The awarded construction cost information shall be collected using the Historical Cost Analysis Generator (HAG). Detailed instructions for preparation and reporting of awarded construction cost information are provided in the HAG user manual.

b. The project cost information to be reported shall include all data elements in the project information screen and facilities screen. For new buildings all cost data shall be reported to the third level (systems level). A sample project cost data report is attached for information purposes.

c. The project cost data report will be submitted on a floppy disk or uploaded to the Cost Engineering Bulletin Board within thirty days after award of the contract and forwarded to HQUSACE (ATTN: CEMP-EC). The cost data report shall be reviewed and approved by the Chief of the Cost Engineering office of the design district or OMSC prior to its submission or release.

2. Cost Data Reports Required.

a. Buildings. Cost data shall be submitted for all new buildings (excluding additions to existing buildings) whether funded by appropriated or nonappropriated funds.

b. Family Housing. Cost data shall be submitted for all types of dwelling (excluding additions to existing dwellings) whether funded by appropriated or nonappropriated funds.

c. Liquid-fuel dispensing facilities and/or storage tanks. (Category Codes 120 and 410) Cost data shall be submitted for all liquid-fuel dispensing facilities and/or storage tanks where the contract award amount exceeds \$200,000 for these facilities.

d. Paving. (Category Codes 110 and 850) Cost data shall be submitted for all paving work where the quantity of paving of any one specified type exceeds 5,000 square yards. Separate reports are required for flexible pavement or rigid pavement where the quantity of either exceeds 5,000 square yards.

ER 1110-3-1300
16 Apr 93

e. Building Demolition. Reports shall be submitted for all building demolition work where the size of the building or facility exceeds 5,000 square feet. Separate

f. Asbestos Removal.

g. Lead Paint Removal.